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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NM-158-AD; Amendment 39-13836; AD 2004-22-08]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to all Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, that requires repetitive inspections of the check valves and air supply ducts of the rear bulkhead for damage, and related corrective actions. This amendment also would require eventual rework or replacement of the air supply ducts, which would terminate the repetitive inspections for the air supply ducts only. This action is necessary to prevent disconnection of an air supply duct, which, if combined with failure of a bulkhead check valve, could result in rapid depressurization of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective December 2, 2004.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 2, 2004.

ADDRESSES: The service information referenced in this AD may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centreville, Montreal, Quebec H3C 3G9, Canada. This information may be examined at the Federal Aviation Administration (FAA), New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York; or at the FAA, Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

FOR FURTHER INFORMATION CONTACT: Dan Parillo, Aerospace Engineer, Systems and Flight Test Branch, ANE-172, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Westbury, suite 410, New York 11590; telephone (516) 228-7305; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to all Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes was published in the Federal Register on June 2, 2004 (69 FR 31047). That action proposed to require repetitive inspections of the check valves and air supply ducts of the rear bulkhead for damage, and related corrective actions. That action also proposed to require eventual rework or replacement of the air supply ducts, which would terminate the repetitive inspections for the air supply ducts only.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Requests To Change Applicability

One commenter does not fully agree with the applicability specified in the proposed AD, and asks that it be changed. The commenter states that, although all airplanes having bulkhead check valves with part number (P/N) 92E20-3/-4 should be inspected, the inspection of the air supply ducts required by paragraph (b)(2) of the proposed AD should not be for all airplanes. The commenter notes that the effectivity range for airplanes specified in Bombardier Alert Service Bulletin A601R-21-053, Revision `A,' dated January 28, 2003 (Rework or Installation of New Air Supply Ducts), identifies serial numbers 7003 through 7067, and 7069 through 7477. The commenter adds that airplanes having serial numbers 7478 and subsequent were modified before delivery by installing new air supply ducts, as specified in Service Bulletin A601R-21-053, Revision `A.' The commenter concludes that the difficulty with the applicability in this proposed AD comes from combining two service bulletins in one AD, when the effectivity specified in those service bulletins is different. The commenter includes two suggestions for changing the applicability section in the proposed AD:

1. All Bombardier Model CL-600-2B19 airplanes pre-mod 601R-21-053, Part B, Part C, or TC601R15375 (air supply duct inspection); or

2. All Bombardier Model CL-600-2B19 airplanes fitted with check valves having P/N 92E20-3/-4 (check valve inspection).

A second commenter also asks that the applicability be changed and states that the inspections and any necessary rework or replacement of the air supply ducts be limited to airplanes listed in Service Bulletin A601R-21-053, Revision `A,' as specified above. The commenter notes that this modification will be incorporated before delivery on airplanes having serial numbers 7478 and subsequent. The commenter operates airplanes having serial numbers 7482 and 7483 which were previously modified. The commenter asks that the final rule contain an effectivity range as listed in Service Bulletin A601R-21-053, Revision `A,' with regard to the inspection of the air supply ducts and the terminating action paragraph.

A third commenter asks that the applicability be changed as well, for similar reasons as the other two commenters. The commenter also asks that the applicability be split into two sections, one for the bulkhead check valve and the other for the air supply ducts, which specify the aircraft effectivity for each inspection. The commenter proposes that the FAA take a similar approach to the applicability of the subject AD. The commenter states that if the applicability is not split as suggested, it may result in an initial inspection of air supply ducts on aircraft having serial numbers 7478 and higher, on which the newly designed air supply duct is installed.

We agree in part with the commenters' requests.

We agree that the applicability specified in this AD needs some clarification. Therefore, we have identified the airplanes subject to the actions specified in paragraphs (b)(1) and (b)(2) within those paragraphs, in order to clarify which airplanes are affected by which actions.

We do not agree to "split" the applicability into two sections, as this would be confusing to operators. Additionally, we do not agree to add the part numbers for affected bulkhead check valves to the applicability section because airplanes having both the bulkhead valves and the air supply ducts are affected by this AD. We have made no change to the AD in this regard.

Request To Reference Revised Service Information/Maintenance Manual

One commenter states that Bombardier Alert Service Bulletin A601R-21-054, dated November 8, 2001 (which is referenced in the proposed AD as an appropriate source of service information for accomplishment of the inspection of the bulkhead check valves), has been revised as of June 30, 2004 (Revision `A'). The commenter adds that the inspection of the bulkhead check valves was removed in Revision `A,' and was added to the Maintenance Review Board Report, Part 1, Maintenance Requirements Manual (MRM) under Task Number 21-51-21-07. The commenter also adds that the repetitive inspection interval is a `C' check (4,000 flight hours), which is consistent with the referenced Canadian airworthiness directive. The commenter notes that Transport Canada Civil Aviation (TCCA), which is the airworthiness authority for Canada, has mandated the incorporation of this inspection into the MRM in lieu of mandating the repetitive inspections specified in the referenced service bulletin. The commenter recommends that the FAA follow TCCAs approach and mandate the repetitive inspections provided in the MRM. The commenter suggests that Revision `A' of the service bulletin, as well as MRM Task Number 21-51-21-07, be referenced for accomplishment of the inspections of the bulkhead check valves specified in the proposed AD.

Another commenter asks that MRM Task Number 21-51-21-07 be added, as an option to using the referenced service bulletin, for accomplishment of the inspections of the bulkhead check valves specified in the proposed AD. The commenter states that it has not accomplished any inspections in accordance with Service Bulletin A601R-21-054, since a similar inspection already exists within its inspection program. Due to the commenter's fleet size, it would have to request an Alternative Method of Compliance (AMOC) to get credit for inspections accomplished in accordance with MRM Task Number 21-51-21-07, in order to meet the requirements specified in paragraph (b)(1) of the proposed AD. The commenter states that although the MRM inspection is not identical to the inspection specified in the proposed AD, the intent of the inspection is met, and is more thorough because the check valves are removed before the inspection is accomplished.

We do not agree with the commenters' requests. Although Part 1 of the MRM is accepted by the FAA, it is not approved, as is Part 2 of the Airworthiness Limitations section. We cannot control revisions of the MRM; therefore, a task could be changed or deleted, and the AD requirements would be modified without our approval. Operators may request an AMOC which would allow the use of a particular task card for accomplishing certain actions required by the AD. However, the AMOC would only be approved for the revision submitted, and any subsequent revisions would require a new AMOC request so we could establish that the AD requirements were not changed or deleted. We have made no change to the AD in this regard.

Request To Clarify Certain Sections in the Preamble

One commenter asks that the last sentence in the Discussion section of the proposed AD be rephrased, for clarification, to state "If the bonding loses shear strength it could result in duct disconnection. Disconnection of an air supply duct in the unpressurized aft equipment bay, combined with a dormant failed bulkhead check valve, could result in rapid depressurization of the airplane."

The same commenter asks that the wording in the third paragraph of the Explanation of Relevant Service Information section be changed, for clarification, to state "It should be noted that terminating action for this repetitive inspection of the bulkhead check valve would only be available once a redesigned check valve is developed and certified for installation on the aircraft."

We acknowledge and agree with the commenter's concerns; however, since those sections of the preamble are not restated in the final rule, no change to the AD is necessary to address the issues raised by the commenter.

Conclusion

After careful review of the available data, including the comments noted above, we have determined that air safety and the public interest require the adoption of the rule with the changes described previously. These changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

We estimate that 280 airplanes of U.S. registry will be affected by this AD.

It will take about 2 work hours per airplane to accomplish the inspection of the check valves, at an average labor rate of $65 per work hour. Based on these figures, the cost impact of the inspection of the check valves on U.S. operators is estimated to be $36,400, or $130 per airplane, per inspection cycle.

It will take about 4 work hours per airplane to accomplish the inspection of the air supply ducts, at an average labor rate of $65 per work hour. Based on these figures, the cost impact of the inspection of the air supply ducts on U.S. operators is estimated to be $260 per airplane, per inspection cycle.

It will take about 4 work hours per airplane to accomplish the replacement of the check valves, at an average labor rate of $65 per work hour. Required parts are free of charge. Based on these figures, the cost impact of the replacement of the check valves on U.S. operators is estimated to be $72,800, or $260 per airplane.

It will take about 3 work hours per airplane to accomplish the rework of the air supply ducts, at an average labor rate of $65 per work hour. Required parts are free of charge. Based on these figures, the cost impact of the rework of the air supply ducts on U.S. operators is estimated to be $54,600, or $195 per airplane.

It will take about 2 work hours per airplane to accomplish the replacement of the air supply ducts, at an average labor rate of $65 per work hour. Required parts are free of charge. Based on these figures, the cost impact of the replacement of the air supply ducts on U.S. operators is estimated to be $36,400, or $130 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic

impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-22-08 Bombardier, Inc. (Formerly Canadair): Amendment 39-13836. Docket 2003-NM-158-AD.

Applicability: All Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent disconnection of an air supply duct, which, if combined with failure of a bulkhead check valve, could result in rapid depressurization of the airplane, accomplish the following:

Service Information References

(a) Paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of this AD pertain to the service information referenced in this AD.

(1) The term service bulletin, as used in this AD, means the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-21-053, Revision `A,' dated January 28, 2003; and Bombardier Alert Service Bulletin A601R-21-054, dated November 8, 2001; as applicable.

(2) Although the service bulletins referenced in this AD specify to submit certain information to the manufacturer, this AD does not include such a requirement.

(3) Bombardier Alert Service Bulletin A601R-21-054, dated November 8, 2001, recommends sending all damaged check valves to the manufacturer for analysis; however, this AD does not include that requirement.

(4) Accomplishment of the actions specified in Bombardier Alert Service Bulletin A601R-21-053, dated November 8, 2001, before the effective date of this AD is considered acceptable for compliance with the applicable actions specified in this AD.

Repetitive Inspections/Related Corrective Actions

(b) Within 500 flight hours after the effective date of this AD: Do the detailed inspections and related corrective actions required by paragraphs (b)(1) and (b)(2) of this AD, per the applicable service bulletin.

(1) For airplanes having bulkhead check valves with part number (P/N) 92E20-3/-4, as identified in Bombardier Alert Service Bulletin A601R-21-054, dated November 8, 2001: Inspect the left- and right-hand bulkhead check valves for damage (cracking, breakage). If any damage is found, before further flight, replace the damaged valve. Repeat the inspection at intervals not to exceed 4,000 flight hours.

(2) For airplanes having serial numbers 7003 through 7067 inclusive, and 7069 through 7477 inclusive: Inspect the left- and right-hand air supply ducts of the rear bulkhead for damage (tearing, delamination, or cracking). If any damage is found, before further flight, either rework or replace the

damaged air supply duct, which ends the inspections for that air supply duct only. If no damage is found, repeat the inspection thereafter at intervals not to exceed 500 flight hours until accomplishment of paragraph (c) of this AD.

Note 1: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required.

Terminating Action for Repetitive Inspections of Air Supply Ducts

(c) Except as required by paragraph (b)(2) of this AD, for airplanes having serial numbers 7003 through 7067 inclusive, and 7069 through 7477 inclusive: Within 5,000 flight hours after the effective date of this AD, either rework or replace the left- and right-hand air ducts, as applicable, per the applicable service bulletin. Accomplishment of this paragraph ends the repetitive inspections required by paragraph (b)(2) of this AD.

Alternative Methods of Compliance

(d) In accordance with 14 CFR 39.19, the Manager, New York Aircraft Certification Office, FAA, is authorized to approve alternative methods of compliance for this AD.

Incorporation by Reference

(e) Unless otherwise specified in this AD, the actions shall be done in accordance with Bombardier Alert Service Bulletin A601R-21-053, Revision `A,' dated January 28, 2003; and Bombardier Alert Service Bulletin A601R-21-054, dated November 8, 2001; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

Note 2: The subject of this AD is addressed in Canadian airworthiness directive CF-2003-05, dated February 4, 2003.

Effective Date

(f) This amendment becomes effective on December 2, 2004.

Issued in Renton, Washington, on October 18, 2004.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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